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ABSTRACT

Can Total Quality Management (TQM) improve the performance of school systems in meaningful ways? This paper evaluates the soundness of TQM as an improvement program for education by comparing its philosophy and prescriptions with the mounting theoretical and empirical wisdom on introducing and sustaining large-scale organizational change and more specifically, school reform. Following a brief introduction to the fundamental tenets of TQM, the paradigm is systematically compared with the common themes of the organizational change and school reform literature. Among the strengths noted for TQM as a school-improvement program are its focus on studying and evaluating processes, data-based decision making, systems thinking, and continuous learning and development for all staff. TQM's potential weaknesses (common to many reform efforts) include insufficient attention to the political nature of schooling, the difficulty of defining education's "customers," the difficulty of changing an existing culture, and insufficient time and money. The paper concludes by discussing a number of areas for future theoretical and empirical research on TQM as an educational improvement program. Twelve tables are included. (Contains 52 references.) (LMI)

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Using the lessons of organizational change and previous school reforms to predict innovation outcomes: Should we expect more from TQM?

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Abstract

This paper evaluates the soundness of Total Quality Management (TQM) as an improvement program for education by comparing its philosophy and prescriptions with the mounting theoretical and empirical wisdom on introducing and sustaining large-scale organizational change and more specifically, school reform. Following a brief introduction to the fundamental tenets of TQM, the paradigm is systematically compared with the common themes of the organizational change and school reform literature. Among the strengths noted for TQM as a school improvement program are its focus on: studying and evaluating processes, data-based decision-making, systems thinking, and continuous learning and development for all staff. TQM's potential weaknesses (which are common to many reform efforts) include: insufficient attention to the political nature of schooling, the difficulty of defining education's "customers," the difficulty of changing an existing culture, and insufficient time and money. The paper concludes by discussing a number of areas for future theoretical and empirical research on TQM as an educational improvement program.

I. Introduction

"Demingism is likely to effect a far more significant improvement in the quality of a school's educational program than the outmoded remedies currently being recommended at the national level," claimed the introductory comments to a 1993 *Phi Delta Kappan* article on the educational consequences of W.E. Deming and his Total Quality Management (TQM) philosophy (Holt, 1993). Many practitioners and researchers have accepted this claim, the former adopting TQM or other Quality initiatives in their schools and districts, the latter producing articles and books outlining the progress and obstacles in implementation (i.e. Siegel & Bryne, 1995; Schmoker, 1993). State departments of education have been equally enthusiastic about the potential of TQM. The Minnesota Academic Excellence Foundation, for example, established a Partners for Quality program to provide training, resources, and feedback to schools and districts in Minnesota that are utilizing the Quality paradigm.

Is TQM up to the challenge? Can TQM substantially improve the performance of school systems in meaningful ways? Alternatively, is TQM bound to be another "flavor of the month" educational innovation, like the many that have been highly touted today and gone tomorrow? Answers to these questions are explored in this paper. Specifically, we investigate whether the TQM paradigm incorporates both experiential and theoretical wisdom on introducing and sustaining systemic organizational change. Furthermore, we analyze whether the Total Quality Management paradigm addresses the weaknesses of previously failed reforms. It is our contention that unless TQM can be shown to incorporate these lessons from the organizational change literature and previously failed reforms, its potential as a successful large-scale innovation will be as limited as its predecessors. Before beginning to address these questions, though, we begin with some definitions.

In this paper, the term *innovation* will be used to signify any new approach, method, policy, or way of doing things that is introduced into an organization in the hopes of bringing about a substantial large-scale change. The terms *reform* and *initiative* will be used synonomously with innovation. We borrow from Ledford and his colleagues in defining large-scale *organizational change* as "a lasting change in the character of an organization that significantly alters its performance" (Ledford, et al., 1989). To change an organization's character requires changes in the organization's design and its processes. *Performance* is defined as "a broad term that can refer to the system's effectiveness as measured on a number of dimensions or to the nature of the dimensions themselves." Simplified, this definition suggests that large-scale organizational change involves changes in an organization's designs and processes in a way that significantly alters its effectiveness.

Fullan stated, "It is probably closer to the truth to say that the main problem in public education is not resistance to change, but the presence of too many innovations mandated or adopted uncritically and superficially on an *ad hoc* fragmented basis" (Fullan, 1993). Elsewhere he said, "Change is everywhere, progress is not" (Fullan, 1991). Jenkins agreed:

> Education goes from change to change to change without any data on improvement. For example, some states require new textbooks to be adopted every six or seven years. It is assumed that the change from the old textbook to the new textbook will be an improvement; but in fact it is only a change, without one shred of evidence that the new textbook resulted in any improvement. *Change is a neutral word; it can represent a positive or a negative. Improvement, on the other hand, is defined as positive change* (Jenkins, 1997).

We agree with Fullan and Jenkins that "change for change's sake" is not a laudable outcome of innovation. However, *improvement* (or *positive change*) --defined as better performance or increased effectiveness on specified dimensions -- is the standard by which innovations should be judged. More specifically, we agree with Jenkins that the most important dimension for judging

school innovations must be classroom learning: "If an educational theory does not improve classroom learning it matters not how many legislators, edictors, or other leaders ascribe to the theory; it is useless" (Jenkins, 1997).

Section II provides a brief overview of the TQM philosophy and its major tenets. Seven principles, as derived from a synthesis of the vast TQM literature, and Deming's Fourteen Points of Total Quality are briefly introduced. The tailoring of these principles, which were originally developed in industrial settings, to the educational arena is also discussed. Section III reviews the organizational change literature, drawing on theorist and practitioner prescriptions for introducing, sustaining, and institutionalizing changes to complex, bureaucratic institutions. The work of several well-known change researchers will be compared in detail with the fundamental tenets of TQM. The TQM paradigm is further tested against a synthesis of numerous other change prescriptions to see whether, *a priori*, TQM as an organizational innovation seems up to the challenges of organizational change. Section IV reviews a small sample of the literature on previously failed or failing school reform efforts. An attempt is then made to ferret the themes and commonalities in these descriptions of failure. TQM is then compared with these themes, in this case to see whether, *a priori*, the Quality paradigm addresses these pitfalls of previous reforms. Section IV also discusses briefly the common elements of successful school transformation and looks for alignment between these findings and the tenets of TQM. Section V presents our overall evaluation of how TQM fares against the organizational change and school reform literatures discussed in Sections III and IV. Four areas for further theoretical and empirical work are also noted.

II. An Overview of TQM

The philosophy and principles of TQM have been well-documented (Deming, 1993; Creech, 1994; Aguayo, 1990). The names of leading Quality gurus like Deming, Crosby, and Juran have become as well known in industry circles as Dewey is in education. More recently, education scholars have begun publishing articles and books that translate TQM into more "education-friendly" parlance (Jenkins, 1997; Arcaro, 1995; Bonstingl, 1992a,b). For example, Lee Jenkins', Superintendent of Enterprise School District in Redding, CA, recent work is replete with examples of teachers using TQM tools to tackle classroom problems and improve student learning (Jenkins, 1997). While the philosophy of TQM remains the same whether applied to industry or education, these newer books seem likely to attract a wider audience of potential school adopters, since school leaders and teachers alike will be more interested in investing time and money in a program once they see its direct applicability to their circumstances.

Over the past several years of investigating TQM and its applicability to education, our research team at the University of Minnesota[1] has reviewed a large number of books and articles, attended workshops, and listened to people speak about the TQM philosophy, principles, and tools. Our synthesis of these experiences suggests essentially seven main components to the Quality paradigm: customer input and focus (CF), continuous improvement (CI), systems thinking (ST), leadership (LD), training (TR), studying and evaluating processes (SEP), and data-based decision-making and action (DBDM). While these categories do not directly coincide with the criteria used in the national Malcolm Baldrige Quality Award, a good degree of overlap exists (NIST, 1997). In addition to these categories, another common thread throughout the TQM

[1] This team includes the present authors and Michelle Bauerly-Kopel and Roger Jenni. Their contributions have played a significant part in the formulation of the ideas expressed in this paper.

literature is the tendency for each "Quality guru" to have a concise list of points outlining the critical elements of the philosophy. Edwards Deming's Fourteen Points is the most oft-cited of these lists.

Without denying the validity of other descriptions or organizing frameworks, "TQM" as utilized in this paper will be defined by our seven categories and Deming's Fourteen Points. The use of these seven categories and fourteen points will allow us to develop a labeling scheme for use throughout this paper. While a complete description of the TQM paradigm is well beyond the scope of this paper, we have chosen to answer Michael Fullan's question, "What types of things would have changed if an innovation or a reform were to become fully implemented?" as our basis for a short introduction to the seven categories of TQM. We begin by discussing what full implementation of each of the seven categories would look like in an organization wholly embracing the TQM paradigm.[2] Then, we present in Table 1 Deming's Fourteen Points, along with some rephrasing of these points into more educator-friendly terms by Jenkins (1997). Bonstingl (1991) and Borgers and Thompson (1994) have also discussed how each of Deming's points can be applied by schools.

Customer Input/Focus (CF)

The organization would have clearly defined who its customers are. For schools, customers can include students, parents, staff, businesses, post-secondary institutions, and others. According to Deming, it is critical for an organization to state clearly who its customers are, since quality is defined by the customer. Stated another way, "Quality is defined by the customer's perspective of value, not simply by adherence to strict process or performance

[2] Our description of TQM relies heavily on the literature synthesis done by Michelle Baurely-Kopel.

specifications" (Bowles & Hammond, 1991). Being the best at something today's customers don't want is simply not Quality.

While defining customers may be more straightforward for businesses, educational organizations often struggle to define their primary customer given the many stakeholders involved in the system. Marchese (1993) divided schools' customers into two categories -- internal and external. Among the internal customers are students and staff; external customers include funders, donors, higher educational institutions, and employers. Regardless of how an organization chooses to define and organize its constituents, customers must be identified and agreed upon by an organization practicing TQM.

Once an organization has defined its customers, it must constantly work to understand their needs, desires, and satisfaction level. If quality is defined by the customer, then organizations must continuously ask their customers questions like, "What are your expectations of us?" and "How are we meeting your expectations?" Unless the organization takes these steps, simply knowing who its customers are will be meaningless. The most commonly employed vehicles for getting customer feedback include: surveys, interviews, focus groups, and voting results. Soliciting customer input and feedback in a school setting would include asking parents how satisfied they are, including students in planning, and surveying local businesses for their satisfaction with recent graduates (assuming these groups have been defined as customers).

In short, the most noticeable change in a district applying customer focus/input would be that goals, processes, and acceptable outputs would be defined through communication with customers, not dictated by a solitary group of teachers or administrators, though the latter groups have a right and a responsibility to educate customers in order to influence their expectations.

Continuous Improvement (CI)

The organization would be constantly striving to improve its key processes and outputs. Tribus (1994) has called this the "keystone in the Deming philosophy." This element of TQM is both philosophical and practical. Philosophically, continuous improvement forces an organization to focus on quality as a never-ending journey, not something to be "done" and then forgotten about. This is why Deming and others insisted that quotas must be eliminated -- once the quota is attained, efforts to improve often cease. Companies like Motorola demonstrate this commitment by continuing to search for improvements to processes that produce far fewer than one defect per million. Practically speaking, continuous improvement demands documentation of results over multiple periods of time.

An organization with the continuous improvement mentality would utilize some process to guide its improvement efforts. One of the most commonly utilized processes is Shewart's PDCA (Plan-Do-Check-Act) Cycle. The steps of this cycle are:

1. Define the system
2. Assess the current situation
3. Analyze causes
4. Try out the improvement theory
5. Study the results
6. Standardize the improvements
7. Plan the next improvement

Steps 1-4 may not be unique to TQM thinking. It is steps 5-7, which insist upon documenting and studying the results and beginning the next round of improvement which defines the continuous improvement mentality.

In short, a district that has adopted TQM would be striving to continuously improve in key areas rather than accepting things as "good enough" or "the best we can do."

Systems Thinking (ST)

Systems thinking would be the norm throughout the organization. According to Senge (1995), systems thinking means "seeing the whole" as opposed to only the isolated parts of the system in which one operates and can directly impact. Systems thinking requires all organizational members to consider how their actions impact *all others in the system.* Individuals who understand their existence in a larger system see the interconnectedness of disparate parts. Examples of systems thinking in education include K-12 curriculum alignment or a secondary principal who understands the impact that changes in scheduling may have on law enforcement, students' admission into college, student and parental satisfaction, etc.

Systems thinking would be demonstrated in a school district through goal alignment, which refers to the consistency of goals throughout the district. Goals articulated by classroom teachers should be consistent with those of the building principal, whose goals should be in line with those articulated by the superintendent and school board. Furthermore, in a district employing systems thinking one would not observe the plethora of piecemeal reforms so common in the educational environment as these non-systemic changes will only lead to unintended consequences elsewhere (Betts, 1992; Wilson & Hedlund, 1994; Jenkins, 1997).

In short, employees in an organization focused on systems thinking understand how their actions affect others and the system itself, and set goals or introduce changes in ways that maximize the results of the entire system.

Leadership (LD)

The organization would have clear and consistent leadership. Top management leadership, through both word and action, is critical for all Quality efforts. The TQM philosophy

rejects the idea that leaders can offer only token or pseudo-support and still expect positive change to occur. Instead, TQM insists on the active leadership of top personnel.

This does not mean TQM advocates a dictatorial approach to management. In fact, just the opposite true. True leaders in a TQM system would work to empower all employees and would foster leadership throughout the system. Critical in Deming's view of a TQM system is leadership which creates trust and eliminates blame, criticism, and coercion throughout the system. Furthermore, Quality leadership includes: articulating and maintaining focus on the Total Quality vision, modeling use of TQM tools, ensuring customer focus, leading long-term strategic planning, ensuring appropriate structures and systems are in place, motivating individuals and teams, and monitoring and evaluating success (Doherty, 1994).

In short, leadership in a TQM district must be completely supportive, in words and actions, of the continuous pursuit of excellence. Employees cannot and will not pursue systemic improvement unless leadership creates the conditions through modeling and removal of barriers.

Training (TR)

Employees would be continuously acquiring new knowledge and skills. To be effective, training in a TQM district should be aligned with the district's primary goals, demonstrate applicability to the work setting, and help participants select Quality projects (Walley & Kowalski, 1992). All training should be focused on the continuous improvement goals of the district, which means ending the common practice of allocating professional development dollars for miscellaneous, unrelated programs.

According to Deming, all employees should be trained in the Total Quality philosophy and tools. Following original training in TQM, ongoing education for employees must become

part of the organization's culture. Original training should be focused on learning the philosophy and tools of TQM; ongoing training could combine refreshers and more depth on TQM itself and training around the substantive issues which analysis has identified as priorities for continuous improvement efforts. New employees would be selected based in part on their willingness to adopt the TQM paradigm and their initiation/pre-services should include training in TQM equivalent in depth and breadth to the organization's original training. Mentoring and internal teachers-teaching-teachers would be encouraged.

In short, all employees in a TQM district must be trained in the philosophy and tools of this paradigm. Continuous learning and development of employees would be part of the organization's culture. Training and development activities would be aligned around the district's primary vision and goals.

Studying and Evaluating Processes (SEP)

The organization would focus on processes (i.e. curriculum design, curriculum delivery) rather than outputs/outcomes (i.e. graduation rate, test scores) or inputs (seat time, number of school days). TQM does not downplay the importance of critical outcomes; it simply argues that one cannot improve outcomes by directly focusing on them. Instead, people must study the processes which transform inputs into outcomes and seek to improve them. According to TQM thinking, the only way to improve outcomes is to improve the processes responsible for them (Bonstingl, 1992a).

Numerous tools are available for studying and evaluating the key processes of a school district. Among the most common and powerful tools for analyzing processes are: flow diagrams, cause-and-effect (also called Ishikawa or Fishbone) diagrams, run or control charts,

scatter and pareto diagrams, nominal group technique and force-field analysis. While enumerative studies (those that count items or evaluate things) are commonplace in education, analytic studies (those that search for causes behind phenomena) are relatively scarce. The aforementioned TQM tools, especially those based on the concept of statistical control, are used by organizations to study and evaluate processes in the analytic sense (Rinehart, 1993).

In short, TQM organizations study and evaluate processes, looking for the key causes/explanations of observed outcomes. They perform analytic studies using statistical and other Quality tools to search for root causes.

Data-Based Decision-Making (DBDM)

The organization would make key decisions based on data. This practice is sometimes referred to as "Management by Fact." While many organizations collect vast amounts of data, final decisions are ultimately made based on the "gut-level" reaction or anecdotal experience of power holders. TQM rejects this type of decision-making and insists that decisions be supported by research and data. For example, the use of this TQM principle would lead a teacher to make changes in a course based on student performance, student and other stakeholder feedback, and comparisons with similar courses in other schools or districts. A teacher not exemplifying this principle would base decisions on course changes on what he or she *perceived* to be students' interest level or society's expectation of graduates or *feels* is important for students.

Many of the tools used for studying and evaluating processes are also useful for making data-based decisions. Information from Pareto charts, control charts, or surveys are among the types of data organization and analysis tools which can be used to make decisions.

In short, a district committed to TQM would base decisions on data, not gut reactions or anecdotal evidence. The data used for making decisions would consist of both internally collected data and research on "best practices" found elsewhere.

--- Insert Table 1 -- Deming's 14 Points ---

III. TQM and the Organizational Change Models

Fullan (1991) argued that the new wave of organizational reforms are more comprehensive, with the intent to bring about systematic change. Unlike previous piecemeal reform attempts, these new reform efforts will require significantly greater expenditures of time, money, and human resources across multiple levels of an organization. This makes an understanding of the "strong base" of available evidence about how and why educational reform fails or succeeds more important for policy-makers, administrators, and implementors than ever before. In addition to discussing the importance of a systemic view of change, Fullan discussed the importance of creating norms of continuous improvement, of bringing teachers together to learn, plan, and evaluate, and of leadership that is both visionary and action-oriented. These points are in complete harmony with the TQM philosophy.

At the broadest level, the change process can be considered to consist of three phases -- initiation, implementation, and continuation (Fullan, 1991). All three phases are influenced by the outcomes which are attributed to the innovative effort. According to Fullan, the single most important factor about this simplified description of change is that "change is a process, not an event." This of course, is directly in line with the TQM paradigm, which views all improvement as a continuous process, not a one-time event.

In this paper, only Fullan's implementation phase will be considered in detail, as the primary question we are concerned with is whether TQM programs are more likely than other reforms to actually be used and to produce noticeable changes *after* the decision to adopt the program has been made.

In describing the nine factors that interact to affect the degree of implementation, Fullan explained his model's systemic nature: "Put positively, the more factors supporting implementation, the more change in practice will be accomplished." In addition to these nine factors, Fullan borrowed largely from Louis and Miles (1990) in identifying six key themes in successful improvement efforts. As with the nine factors, the six key themes are described as a dynamic, interrelated system of change. Fullan stated, "All six themes in concert are required for substantial change to occur." The Fullan models, and their fit with TQM, are examined in Tables 2 and 3.

--- Insert Table 2 -- Fullan's Interactive Factors Affecting Implementation ---

--- Insert Table 3 -- Fullan's Key Themes in the Implementation Process ---

In his subsequent book, *Change Forces*, Fullan (1993) predicted the emergence of a new paradigm for conceptualizing and implementing change, citing "breakthrough" works by change, psychology, and management scholars. He also singled out several other well-known books on change as "chronologically new, but paradigmatically old or wrong."[3] Naturally, Fullan aligns himself with the former group, calling for "a new mindset about educational change." Fullan's

[3] It is beyond the scope of this paper to investigate Fullan's claim about the validity of certain change models. The reader is encouraged to consider TQM's robustness when compared against an array of change models.

new paradigm for describing the dynamic process of educational change contains eight basic lessons. These lessons are considered an interrelated set; no one lesson has utility in isolation. Having considered how TQM related to Fullan's earlier thinking in Tables 2 and 3, Table 4 contrasts Fullan's new thinking with the tenets of TQM.

--- Insert Table 4 -- Fullan's Eight Basic Lessons of the New Paradigm of Change ---

One of the books Fullan considered representative of the new paradigm thinking is *The Critical Path to Corporate Renewal*, by business professors Beer, Eisenstat, and Spector (1990). In a Harvard Business Review article summarizing the main findings from their book, these authors described their findings from a four-year study of organizational change at six large companies as contradictory to the established thinking, which they termed "programmatic change," about organizational change. Instead what they witnessed was a sequence of six basic managerial interventions carefully employed during the change process. They labeled the process they observed in the successful companies "task alignment," which means starting change efforts at the periphery and moving steadily toward the core. Important also in the companies they observed was the ability of senior managers to recognize their limited ability to mandate change from the top, instead they created a climate for change and spread the lessons of successes and failures.

The revitalization efforts studied by Beer et al. seemed to require three interrelated factors: coordination or teamwork, commitment, and new competencies (i.e. analytical skills, interpersonal skills) for solving problems as a team. The TQM paradigm is in complete agreement with these findings, particularly on the teamwork and new competency-building

elements. As the authors do not explain how the necessary commitment is to be engendered, it is impossible to discuss TQM's response, except perhaps to say that TQM contains specific tactics for empowering people by reducing their fear, increasing their input, and responding to their concerns.

How, then, can task alignment be achieved? Beer et al. outlined six steps which can be utilized by middle-level managers. They termed these steps the "critical path," through which a self-reinforcing cycle of commitment, coordination, and competence develop. Perhaps the most important departure from traditional thinking about change in this model is the assertion that successful renewal efforts start small (usually not at the top), and only slowly spread to the entire organization through formal visions, structures, etc. Notice that revitalization is not spread to all departments until step four; new policies, systems, and structures don't emerge until step five. Changing an entire corporation would require applying these six steps multiple times throughout the organization. The steps in the critical path to renewal are listed in Table 5, along with their relation to TQM.

--- Insert Table 5 -- Beer, et al.'s Critical Path to Corporate Renewal ---

Another finding from the Beer et al. study was that in the early years of a change effort, top managers' actions were often not consistent with their words. The authors' conclusion was the following:

> Such inconsistencies don't pose a major barrier to corporate change in the beginning, though consistency is obviously desirable. Senior managers can create a climate for grass-roots change without paying much attention to how they themselves operate and manage.

It is difficult, if not impossible, to align this finding with TQM thinking The Leadership principle and Points 1, 7, 8, 9, and 12 clearly call for managers at all levels to be consistently involved, in both word and action, from the initiation of the effort. Beer et al. did acknowledge the importance of top management eventually "walking the talk," stating that the whole process can break down if this doesn't occur. We believe that TQM's call for immediate consistency between leaders' words and actions is more in line with what teachers and staff expect of their leaders in the average school climate. Absent this alignment, most school staff will resist change and innovation.

In discussing the pitfalls encountered when implementing change, Jick (1993) discussed the desire of students and managers to have a checklist of "dos and don'ts" that will guide them in their own change efforts. Unfortunately, said Jick, decades of research suggests that managing change does not adhere to simple, step-by-step processes that can be specified *a priori*. However, a growing body of work does document the common experiences others have faced in difficult change situations. Jick's own list, which he termed The Ten Commandments, draws upon many of the prescriptions contained in this accumulating planned change literature. Table 6 outlines Jick's Ten Commandments and their relation to TQM.

-- Insert Table 6 -- Jick's Ten Commandments of Implementing Change ---

Included in Commandment 1 is the prescription to study the company's history of change. According to Jick, if an organization already has a track record of opposing change, more care should be taken to design a gradual, non-threatening, and participative implementation process. This would seem to describe the situation facing the introduction of TQM in most educational settings -- a plethora of previously unsuccessful reforms have created an unwillingness to quickly

accept new innovations. This does not seem inconsistent with TQM, as by its very nature this paradigm calls for gradual, continuous implementation in an environment where trust replaces fear and criticism.

To this point, we have reviewed individually the prescriptions of some of the most well-known scholars of organizational change. A similar presentation of the remaining organizational change literature would result in a book-length review. Fortunately, a number of common themes pervade this vast literature. As an example, we studied five additional writings on organizational change looking for conclusions common to at least two of the pieces. In Table 7, we present the eleven common themes we found in these five studies regarding overcoming barriers and producing organizational change. We also note the works from which themes were drawn and compare them with the TQM paradigm. The similarity of the themes presented in Table 7 with those in Tables 2-6 suggests we have probably approached theoretical saturation of this literature.

--- Insert Table 7 -- Common Themes in Organizational Change ---

As a final note to this section, we discuss the work of Schaffer and Thompson (1992), who agreed with Silverzweig and Allen (1976) and Kanter (1992) that successful change programs begin with results. They distinguished such results-oriented change programs from "activity-centered" improvement programs which amount to activities that feel good, sound good, and look good but end up producing little or no bottom-line improvement. Table 8 outlines Schaffer and Thompson's six reasons why activity-centered programs don't lead to improvements.

--- Table 8 -- Six Reasons Activity-Centered Programs Don't Work ---

We do not disagree with Schaffer and Thompson's criticisms of activity-centered programs. However, we feel their labeling of "total quality" or "continuous improvement" programs as among these fatally-flawed activity-centered programs represents a fundamental misunderstanding of TQM on their part. Schaffer and Thompson's reasoning and our response is presented briefly below.

As evidence for their contention that activity-centered programs like TQM don't produce improvements, the authors cited a 1991 survey of electronics companies which found that although 73% of the companies had a total quality program, 63% had failed to improve quality defects by even 10%. While one interpretation of this finding supports Schaffer and Thompson's contention that TQM is an activity-centered program and it doesn't work, an equally plausible (and more in line with our observations in schools) interpretation would be that TQM was not being implemented fully in the majority of electronics companies. In fact, our early observations suggest that many TQM adopters begin with the easier parts of the philosophy, which center around establishing activities like Quality teams, using brainstorming or other idea-generating tools, etc., and never get to the heart of TQM -- which clearly calls for measuring, documenting, and continually improving both processes and results. If this is often the case, the fault lies in the implementation, not the substance of TQM.

It is our contention that while the criticisms leveled against activity-centered programs have validity in some cases, the authors have ignored key elements of the TQM paradigm when citing it as an example of a program that ignores results. That is, the authors have chosen

specific elements from the TQM paradigm to make their point against it, when a consideration of the system in its entirety (which is of course the only way TQM proponents say it should be used) refutes some of their claims. Table 9 compares the TQM system in its entirety with the criticisms of activity-centered programs.

--- Table 9 -- TQM's Response to Activity-Centered Program Criticisms ---

IV. TQM and Education Reform

To better understand the elusiveness of long-term change in education, Latham (1988) studied twenty-seven innovations over a twelve year period. He discovered a pattern among these schools which he termed "the birth and death cycles of educational innovations." Latham explains this pattern, which he found in all twenty-seven sites:

> The typical innovation is born in a moment of great interest, is soon implemented, and peaks in about a year and a half. This peak is then followed by a precipitous decline in enthusiasm, and the innovation dies about four years from the time that interest in it was first generated.

Also common to these innovations were eight characteristics which seemed to explain their failure. Latham found that practitioners became disenchanted and disillusioned because innovations took too much time, took too much effort, and required too much personal change. Furthermore, training and other resources were insufficient for overcoming these barriers. Almost common among failed innovations was insufficient supervision, lack of accountability, and lack of consequences for non-use or termination. In many cases, the departure of innovation supporters halted the effort.

Fullan (1991) provided a synthesis of Wilson and Corcoran's (1988) study on reform in 571 unusually successful secondary schools. In examining how some of these schools achieved

remarkable turnarounds in performance, Wilson and Corcoran found several familiar themes. They labeled these themes: active leadership, professional work environments, positive learning opportunities, broad community involvement, service to all students, and continuous improvement. It is interesting to note the similarity between these themes from successfully reformed schools and TQM. For example, active leadership, professional work environments, and positive learning opportunities are clearly called for under TQM's Leadership and Training categories. Broad community involvement clearly overlaps with Customer Input and Focus. Finally, the continuous improvement mentality, found common among successful secondary schools, is at the very heart of the TQM paradigm.

Louis, Kruse, and Raywid (1996) compared the fate of two school reform efforts. They attributed the success of one effort and the failure of the other to the collective learning opportunities within a professional community that existed in the successful school. The authors stated that organizational inertia often stifles the creative efforts and ideas of teachers. Indeed, teachers in the faltering school did not lack "energy, hope, or talent" -- they simply did not have adequate opportunity to express these traits. To overcome this inertia, three features of a school culture are helpful: organizational memory, a shared knowledge base, and information distribution and interpretation.

Louis, Kruse, and Raywid argued that to achieve restructuring or other significant reform, schools must become stronger professional learning communities, which is done by creating and sustaining five conditions: shared norms and values, reflective dialogue, de-privatization of practice (i.e. peer review/mentoring), collective focus on student learning, and collaboration. By calling for empowered teams to study and evaluate processes, the eliminate of coercion and

blame, constancy of purpose, and continuous education and retraining, TQM seems to address this call.

Clark and Astuto (1994) argued that the failure of the current reform movement is rooted in a set of nested assumptions that constrain the range of changes proposed or initiated in our schools. They stated, "The root cause of the failure of reform is the limited imagination that has informed the reform proposals." This makes unveiling and challenging the assumptions of the system about school personnel's motivation, abilities, and level and type of contribution to organizational outcomes critical, especially given these assumptions seem to be contradicted by reality.

For example, Clark and Astuto discussed the assumption that Theory X of motivation is correct -- namely, that people inherently dislike work and must be micro-managed to be productive. For example, state monitoring and accountability systems reflect a concern that local educators will not work hard enough to support student learning unless coerced to do so. Yet both research and common sense (teachers don't get big bucks, impressive titles, or much respect) support Theory Y (which states that people are intrinsically motivated work toward outcomes to which they are committed). Thus, "the extent to which individuals in subordinate roles avoid responsibility or lack ambition would appear to be a consequence of past opportunity and experience, not an inherent characteristic" (Clark & Astuto, 1994). Darling-Hammond (1993) attributed much of the current failure of reforms to the contradictory nature of mixing Theory X-and Y- based approaches.

The assumptions made about motivation have led to bureaucratic school structures that exert a debilitating effect on students by socializing students to view work as dull and

constraining and by reining in their natural curiosity. Principles and beliefs that result from the bureaucratic mindset are also detrimental to schools -- for example, work is organized so that teachers are replaceable parts. In this type of system, "teachers create their own worlds within the classroom and leave schoolwide purposes and directions to others."

Clark and Astuto concluded: "The current education reform movement is stuck in a worsening negative cycle, unable to deliver on its promises and destructive to the human spirit." This is the result of the language of educational reform, which is dominated by words like bureaucracy, control, competition, and intervention. These words represent "a discourage language of trust and inspection." TQM responds to this Tayloristic, Theory X style of management by calling for the elimination of coercion and fear and the removal of barriers preventing staff from working together toward systemwide improvements. Furthermore, TQM's focus is on the quality of continuously improving processes, as opposed to final inspection. In short, the psychological basis of TQM (believing individuals are inherently motivated but thwarted by ineffective systems) is clearly more aligned with Theory Y.

Pogrow (1996) argued that education reforms almost always fail because they are based on a set of myths. While dooming the reform efforts in general, these myths also produce a number of specific consequences, including:

1) massive waste of resources on staff development and dissemination;
2) no professional standards by which we validate the reforms we are considering (or already implementing); and
3) substitution of philosophy of process for philosophy of outcomes

In discussing the eight myths of education reforms, and the associated realities as he sees them, Pogrow presented his view that teaching, like doctoring, is more of a science than an art. Therefore, like the surgeon, we should give teachers a scientifically proven procedure to use and

not expect (or allow) them to tailor it as they please -- the result of which would be malpractice in medicine. According to Pogrow, the failure of many current efforts, including restructuring, site-based management, full inclusion, constructivism, and portfolio assessment can be explained by the little or no "technology" underlying them. Table 10 lists Pogrow's eight myths and realities.

--- Insert Table 10 --Pogrow's Myths and Realities of Education Reform ---

Darling-Hammond (1993) argued that school reform efforts must shift from being centered on designing controls to direct the system to developing the capacity of schools and teachers. Rather than seeking to standardize practice to make things more efficient, reform efforts should be focused on building the capacity of schools and teachers to undertake tasks they have never before been called upon to accomplish. This shift in focus can be accomplished only by investing in individual and organizational learning -- in knowledge, skills, and dispositions of teachers and administrators, as well as those of parents and community members. She stated: "Indeed, all the solutions to the problems cited by education's critics are constrained by the availability of talented teachers, by the knowledge and capacities those teachers posses, and by the school conditions that define how that knowledge can be used." Current efforts at reform are also likely to fail unless they are built on a foundation of teaching knowledge and are sustained by a commitment to structural rather than merely symbolic change.

Tye (1992) discussed current approaches to restructuring and outlined why these approaches are probably "doomed to failure." Defining "restructuring" as decentralized

decision-making and site-based management, Tye argued these approaches will usually fail because:

> 1) changes do not become institutionalized -- training is too brief with no follow up;
> 2) restructuring is political, it deals with altering the power and authority structures which leads to conflict when handled poorly; and
> 3) restructuring does not alter the "deep structuring of schools." For example, schools are perceived to play a custodial function, so parents resist early release even though it may be necessary to do more staff development.

Sykes (1996) argued that increased professional development (particularly for teachers) is needed since "reform magnifies the 'endemic uncertainties' of teaching." Reform is difficult for teachers, especially initially, since it erodes competence and confidence as old methods are deconstructed and new methods are constructed in their place. He concluded: "If the many reforms under way are to realize their potential and to spread to many schools, then new approaches to teacher learning will be needed. Reform-minded professional development imposes the heavy burdens of coping with the uncertainties of change." This type of professional development, which will include the development of a professional community that serves as a source of insight and wisdom about problems of practice, is far different than traditional training, which emphasizes improving existing practices (Sykes, 1996; Acquarelli & Mumme, 1996).

In his analysis of why other reform efforts have failed to produce significant improvements in the educational system, Jenkins argued that the main problem of programs like merit pay, charter schools, dropout prevention programs, and others is that they focus on problems in the subsystems (Jenkins, 1997). This doesn't work, he said, because attempts to improve a particular subsystem often are at the expense of the whole system. When all parts of the educational system work together, optimization is possible. When subsystems are the focus,

as is the case with so many reforms, only suboptimization can occur. TQM, in his opinion, is different from these reforms because it is fundamentally grounded in the assumption that lasting improvements will only be brought about through *systemic* change.

Jenkins argued that Quality thinking rejects the five most commonly cited "restraining forces" -- tenure, lack of private sector competition, unions, the education establishment, and poor parenting -- as being responsible for maintaining the status quo in education. He believes Deming would have considered these five themes as part of the only 6% of an organization's problems that are caused by people. The real root causes, which explain the other 94% of the resistance to change, are caused by the system. Jenkins then identified the real restraining forces in education as fourteen problems in the system, and proceeded to discuss how Deming's Fourteen Points directly address these forces blocking true improvement in student learning.

Tyack (1995) discussed the reasons that break-the-mold innovations coming from the outside the school system have been mostly short-lived. Most external innovations, he argued, have not understood the school as an institution or had insight into the culture of teachers. Furthermore, the innovations did not show an appreciation for the everyday lives of teachers. For example, in the top-down process of advocating and implementing technology, teachers were rarely consulted even though it was their main job to make it work. According to Tyack, the main implications for educational policy from the history of break-the-mold reforms of recent decades are:

1) Don't over-promise, even if it seems advantageous in the short run;
2) Don't try to change everything at once, but instead graft change onto what is healthy in the present system; and
3) Enlist and honor teachers as the key people in reforming schooling.

These strategies are necessary because teachers tend to resist claims for utopian reform, knowing full well that the burden of implementation and the blame for failure will fall squarely on them, despite the fact that they are generally not involved in the planning stages.

In discussing the problem of changing schools given their present culture, Sarason (1982) cited two major problems facing change:

> 1) the lack of social-historical perspective of school culture; and
> 2) the tendency to explain phenomena in the school scene primarily in terms of the characteristics of individuals.

Regarding the second problem, Sarason argued that explanations based on individuals may contain a grain of truth, but focusing on that grain prevents one from seeing the regularities that persist despite variations in people and their behavior over time. Elsewhere, Sarason stated, "I am not excusing ineffectiveness, incompetence, or mediocrity. But when one concludes that almost all people in a particular role are inadequate, should not one ask what there is about the system that makes or sustains such failures in performance?"

In Deming's terms, what Sarason has identified above is the common practice of blaming people for problems, when in fact the system in which they work is responsible for more than 85% of the problems. As an example, Sarason discussed the failure of the "new math" movement to produce significant change more than ten years after its introduction in the late 1950s because the math change program focused on people, not systems. He stated, "No one viewed the situation as the consequence of processes taking place in and characterizing a particular social organization, or as reflecting conceptions (implicit or explicit) about the nature and structure of the settings that determine how the change process will be effected."

Sarason also discussed the Rand Corporation's study of a national sample of educational innovations funded by federal programs (Sarason, 1982). The study found: "The net return to the

federal investment was the adoption of many innovations, the successful implementation of a few, and the long-run continuation of still fewer." More specifically, the study's authors concluded:

> 1) A project's educational methods determined its implementation, effect, and continuation to only a small and limited extent. In other words, what the project was mattered less than how it was done.
>
> 2) More expensive projects were generally no more effective than less expensive ones in being implemented, eliciting teacher change, improving student performance, or being continued by teachers.
>
> 3) It is difficult to state with certainty what the appropriate initial scope for change efforts should be.
>
> 4) The following activities were frequently ineffective because they were not consistent with the conditions of school district life, or did not match the motivations and needs of teachers: outside consultants, packaged management approaches, one-shot pre-implementation training, pay for training, formal evaluation, and comprehensive projects

On the other hand, Berman and McLaughlin (1977), authors of the Rand study, found the following were effective change strategies, particularly when applied in concert:

a) concrete, teacher-specific, and extended training;
b) classroom assistance from project or district staff;
c) teacher observation of similar projects in other classrooms, schools, or districts;
d) regular project meetings that focused on practical problems;
e) teacher participation in project decisions;
f) local materials development;
g) principal participation in training.

We contend that these findings are largely consistent with TQM. Most notably, a, b, and g are consistent with TQM's training philosophy, item c is a good step toward TQM's call for benchmarking best practices, item d reflects TQM's call for team-based problem solving, item e is consistent with TQM's call for stakeholder input, and item g reflects TQM's call for strong, action-based leadership. Furthermore, the following quote about leadership clearly aligns with TQM thinking: "The importance of the principal to both short- and long-run effects of

innovations can hardly be overstated. All told, the principal amply merits the title of 'gatekeeper of change'" (Sarason, 1982).

In their seminal work covering the last one hundred years of public school reform, Tyack and Cuban (1995) stated:

> Although policy talk about reform has had a utopian ring, actual reforms have typically been gradual and incremental -- tinkering with the system. It may be fashionable to decry such change as piecemeal and inadequate, but over long periods of time such revisions of practice, adapted to local contexts, can substantially improve schools. Tinkering is one way of preserving what is valuable and reworking what is not.

Thus, according to Tyack and Cuban, the history of educational reform suggests that lasting improvements come about incrementally, and that in aggregate, these improvements can be substantial.

Tyack and Cuban discussed a number of reasons why reforms often lead to minimal change. First, educational reforms are intrinsically political in origin. Absent political support and the correct timing, most reforms fail. Second, alterations in basic practices have increased teachers' workloads, often without compensatory time or resources. This burnout results in teachers either ignoring the innovation completely once their classroom door closes or selectively retaining only those parts of the reform which they perceive as useful for making their jobs more efficient or satisfying. Third, the combination of general beliefs in the broader culture about what constitutes a "real school" and the grip of standard operating procedures restricts innovative ideas from taking hold in classrooms. Laws, institutional custom, and cultural beliefs work to hold the "grammar of schooling" in place.

Given these realities -- that most innovations are eventually scaled back and isomorphized to the existing culture of schools -- Tyack and Cuban favor localized improvement attempts that work from the inside out by enlisting teachers and their skills as key components to

reform. Another reason they favor a decentralized approach is that public support is more likely for changes that draw on local knowledge of problems and solutions. Enlisting public understanding and support for change is especially critical when reforms seek to fundamentally alter one or more elements perceived to be necessary parts of a "real school." Since top-down mandates do not seem to produce the dramatic changes that reformers want and instead often have unintended consequences, locally initiated and led improvement efforts seem to have a better chance at producing lasting change. Tyack and Cuban concluded, "Unless practitioners are also enlisted in defining problems and devising solutions adapted to their own various circumstances and local knowledge, lasting improvements will probably not occur in classrooms" (Tyack and Cuban, 1995).

In a blunt assessment of past school reform efforts and their ability to transform schools, Sarason claimed that the failure of educational reform derives from "a most superficial conception of how complicated settings are organized: their structure, their dynamics, their power relationships, and their underlying values and axioms" (Sarason, 1990). The main reason for schools' intractability, according to Sarason, is that we have avoided altering their existing power structures. On the importance of power in complex human systems, he wrote:

> It is a feature that, if not taken seriously, invites failure. This is the fact that any social system can be described in terms of power relationships. Power is distributed unequally among the members of the system, and there is always a rationale for this unequal distribution of power. Any effort to deal with or prevent a significant problem in a school system that is not based on a reallocation of power -- a discernible change in power relationships -- is doomed.

Sarason also noted the lack of systems thinking that is so prevalent in education, writing:

> Teachers, principals, supervisors, curriculum specialists, superintendents, members of boards of education -- with rare exceptions, those who belong to these groups think and perceive in terms of parts and not a complicated system: their parts, their tasks, their problems, their power or lack of it (Sarason, 1990).

Sarason extended this criticism to authors of commission reports, who also, in his opinion, appear uninformed of the larger system. In addition to the general lack of systems thinking that occurs in schools, Sarason noted the need for schools to view problems more broadly than as "within school" problems. Sarason termed any action that stays within the "within school" boundary as "misconceived, parochial, and likely to fail." These critiques by Sarason are addressed directly by the TQM paradigm, which clearly calls for systems thinking through a shared vision and aligned goals and the involvement of all stakeholders, not just those within the school, when conceptualizing problems and solutions.

Sarason's views on leadership, student input, and decision-making also seem aligned with TQM thinking. He argued that when the required change asks people to alter their thinking and practice, leaders must go beyond pronouncement and blessings. TQM clearly calls for action-oriented leadership. On the role of students, Sarason stated, "We often act as though students are the products of school, when, in fact, kids must be the workers in order to learn. So it's hard to explain why we don't routinely ask kids -- especially kids in trouble -- about how to improve schools." This view of students as workers and customers, and the call for student input, is completely consistent with TQM. As for decision-making, Sarason criticized two common practices: 1) a large majority of school personnel feel they have no meaningful role in the process, and 2) educational reform usually derives from opinion, anecdote, an uncritical acceptance of research or desperation. TQM's focus on customer input, teamwork, and data-based decision-making clearly addresses these weaknesses.

In synthesizing the findings from six case studies on school restructuring, Lieberman (1995) found that each case demonstrated the power of authentic bottom-up participation of

teachers who eventually came to support and act on a shared vision. Additionally, in the schools that achieved the most success in restructuring, "new structures put teachers and principals in different relationships to one another, changing expectations as power relationships (were) reconfigured." In most of the schools, power struggles, time, money, and burnout were the major restraining forces. Lieberman suggested that the most significant and critical understanding gained from the cases was how the development of professional communities among teachers, which was built as trust increased, encouraged and enabled teachers to transform their teaching. Finally, all six cases found that comprehensive change requires focusing on issues of restructuring and transformation *of the school*, rather than on specific projects or small-scale innovations.

After five years of intensive ethnographic study in several Coalition of Essential Schools schools, Muncey and McQuillan (1993) outlined their preliminary findings on "the issues, problems, and unanticipated threats to the change process" in a series of seven observations and implications. Briefly, their findings about the difficult process of change in Coalition schools included: 1) a lack of consensus that fundamental changes needed to occur, 2) focusing on the school's philosophy disrupted the "myth" of shared mission or purpose, 3) a "vanguard" of faculty embraced the philosophy, setting up divisions among faculty, 4) political naiveté among change supporters led to conflict and restricted communication, and 5) ongoing reflection on the change was lacking, although apparently necessary.

Muncey and McQuillan offered several conclusions, most which are directly related to the very political nature of school reform. First, school change is not neutral nor are its multiple effects predictable. Finding time and promoting the expertise to deal with these multiple

concerns is expensive. Second, while some things at the schools changed as a result of the new efforts at restructuring, most schools appear resilient to school-wide restructuring. They are not optimistic that other restructuring efforts will prove more successful unless wide-spread faculty consensus is first established, the ongoing process is understood, awareness of the obstacles to be encountered is increased, and a sense of how everyone at all levels of the educational bureaucracy will be held accountable is established (Muncey & McQuillan, 1993).

Recently, Steinberg (1996) argued that school reform has failed because it has not addressed the problems facing education that exist outside the school walls. The conclusions drawn in this book come from 10 years of data collection and analysis, involving more than 20,000 students from 9 schools in Wisconsin and California. Focusing on the problem of student disengagement (being "checked out emotionally" from school), Steinberg found that student engagement or disengagement is determined more by factors outside than inside the school. Most important in promoting student engagement in school are peer culture influences, parental style and involvement, and other home influences.

Steinberg offered ten suggestions for beginning to address the current performance dilemma of American students, concluding that unless we focus on these factors, many of which are external to the school itself, current school reform efforts are as doomed to failure as their predecessors. Among his suggestions are: increase parental involvement in school, establish academic excellence as a national priority and make school performance really count, expand extra-curricular activities and reduce part-time work hours, and adopting a system of uniform national standards, examinations, and transcript guidelines (1996).

The articles and books reviewed in this section represent only a small sample of the literature on school reform efforts. Nonetheless, these pieces document a number of commonalities among the efforts that have been considered failures and among those that have been deemed successful. Tables 11 and 12 document the common elements of the failed and successful efforts. In both cases, we offer our interpretation of how TQM addresses these themes.

--- Insert Table 11 -- Common Elements of Failed Reform Efforts ---

--- Insert Table 12 -- Common Elements of Successful Reform Efforts ---

V. Discussion

We begin our discussion by acknowledging several limitations of the analyses presented in Sections III and IV. First, we note the inherent over-simplification involved in using parsimonious stage or step, linear models or lists of lessons or commandments to explain the extremely complex reality of large-scale organizational change. We agree with Jick, who noted:

> In fact, while the literature often portrays an organization's quest for change like a brisk march along a well-marked path, those in the middle of change are more likely to describe their journey as a laborious crawl toward an elusive, flickering goal, with many wrong turns and missed opportunities along the way. Only rarely does a company know exactly where it's going or how it should get there (Jick, 1993).

Additionally, we acknowledge the numerous differences that persist among organizational change theorists. For example, in reviewing the multiple articles included in their book on large-scale organizational change, Mohrman et al. (1989) discussed the differing views on the genesis

of change, which ranged from externally imposed crisis to an internal drive to improve the quality of work life.

Second, we note that multiple, even conflicting, views on the same issue are often found in the educational reform literature. Before offering his own updated set of change lessons, Fullan (1993) criticized several of the models covered herein as "paradigmatically old or wrong." Darling-Hammond (1993) argued that the focus of professional development should be on "inquiry into teaching and learning, not on the transmission of canned techniques." This seems directly opposed to Pogrow's (1996) call for professional development which imparts "technology, methodology, structure, dosages, and materials" -- in essence, a "canned technique."

These simplifications and differences complicate the comparison process significantly. In this paper we have chosen to acknowledge the probable validity of multiple views on the complex topics of change and reform. We support further comparative work testing these models against empirical evidence. However, absent such knowledge, we chose to compare and contrast TQM with multiple perspectives from both literatures.

With these caveats in mind, we now attempt to evaluate how well TQM has done or will do -- especially in relation to previous school reforms -- when compared to the prescriptions and findings noted in the literature on organizational change and school reform. First, we point where the TQM concept could fall short either in theory or in practice in achieving the goal of true school reform. Probably the biggest potential flaw is that, like almost all other school reform efforts, TQM fails to focus on the need to develop supporting/enabling structures. Without basic changes or additions to an organization's structure or way of operating, most

innovations will not overcome the existing inertia in the system (Jick, 1993). Unless one considers the Plan-Do-Study-Act cycle and formation of teams supporting structures to facilitate implementation of change or the call for continuous education and training an enabler of change, TQM does not seem to focus directly on this issue. Next, we are not sure that TQM gives appropriate attention to the political nature of schooling and to the need to develop political support. The implicit assumption (perhaps appropriately so) is that data collection and use in decision-making will supplant politics as people will be guided by what the data say and not by existing power dynamics. For this to happen, data must be gathered and evaluated objectively and those with power must be willing to relinquish it for TQM to work. The history of reform and change in government and organizations of all types does not bear this out.

Perhaps an even more difficult issue to deal with in TQM is the definition of the customer. One of TQM's great strengths and perhaps most unique feature is its focus on the customer to define quality and results. But who is the customer of K-12 education? Until that question is settled in a practical way (i.e. so that not every stakeholder in the education community is considered the primary customer to be served) it is difficult to agree on goals and measurements and the political problem noted above is exacerbated. Indeed, agreement on goals requires settling extremely difficult questions like, "What is the purpose of schooling?," "Whose children are they?," "Is education a social good or private good?," etc. TQM does not seem to provide much guidance for choosing among the multiple priorities of multiple stakeholders.

Finally, TQM, like almost all other educational reform efforts, is somewhat silent on the processes for changing the cultural norms of the educational establishment and of the local school community and for dealing with the normal human resistors to change. However, it is

assumed, again probably appropriately, that the adoption of TQM is in effect a change in culture and its school-wide or district-wide adoption forces the development of new cultural norms. Our research on TQM in practice will attempt to determine whether and how this has happened. But how does TQM deal with human resistors to change such as fear of loss of power and loss of competence? Regarding the former, it may be inevitable that some lose power and others gain power in a true systemic change, but we are unsure why anyone who stands to lose power will necessarily be any more excited about TQM than any other power-reducing change.

In terms of loss of competence, the TQM concept tries to deal with this reality by emphasizing training and retraining. But will there ever be enough funding for the needed training and retraining that TQM requires? Unfortunately, as with most other reforms, there is an implicit assumption that operating the program is cost-free after the initial investment in introducing it (Latham, 1988). Yet we know there is a cost in retraining and furthering the education of the initial implementors and in training new people, as well as the hidden costs of time and resources needed to keep the TQM process going.

A number of gurus have argued that "Quality is Free" because the additional revenues generated through increased quality and efficiency outweigh the costs of introducing and sustaining TQM. We question whether this logic holds for public education, where currently market share is relatively fixed. The gains in student learning, faculty morale, and customer satisfaction that TQM may help bring about may be well worth the money invested, but they will probably not be free. Perhaps a district that regularly involves its customers and strives relentlessly toward demonstrable continuous improvements will be able to convince its

customers to pay more for these results. Again, our research will try to identify how TQM adopters deal with this issue over time.

While almost all attempts at school reform share with TQM most or all of the above vulnerable aspects, few have as many strengths. On the positive side for TQM, we can point out the many similarities between this paradigm and the ingredients that the literatures on organizational change and school reform say are important - for example, a focus on the customer to define quality (even though the exercise of defining the customer is a difficult step in inaugurating a TQM process), and the need to collect and chart data on both processes and outcomes and to base actions on this data. In addition, TQM takes a systems view (and provides the necessary tools to facilitate looking at the system-wide implication of the changes it requires), forces conversations with various client groups, requires an examination of the management system and processes, and demands resources be devoted to continuous training and education. TQM's insistence on continuous improvement *as a culture in itself* should lead to an institutionalization of the process and thus its long-term use by adopters. Finally, TQM forces people to carefully examine critical processes (hopefully those related to teaching and learning) as well as outcomes. This process focus is critical to real improvement, since all outcomes are the result of one or more processes. All of these strengths make TQM seem more likely than most other reform efforts to have a positive and continuous impact on school reform and improvement.

Future Work

This paper points out numerous avenues for future work, both empirical and theoretical. We briefly discuss four issues below.

1) Gross, Giacquinta, and Bernstein (1971) pointed out that the failure of innovation to produce significant change should not always be attributed to initial resistance to change on the part of organizational members, to lack of parental or community involvement, or to inherent weaknesses in the innovation itself. Instead, they found that innovations fail simply because they never actually get implemented, concluding: "No matter how promising an organizational innovation appears on paper or how well its effects are demonstrated in other settings where it has been implemented, the extent to which the innovation is in fact in operation in the adopting organization must be determined before judgments are made about its effectiveness."

We agree with Gross, Giacquinta, and Bernstein (1971) and Fullan (1991) that the failure of educational reform may be related as much or more to the fact that the innovation was never implemented than to the innovation's substantive flaws or the system's inhibitory forces. Put simply, you can't judge the substance of a reform that was never really implemented. On the other hand, we are inclined to argue that "effective" reforms will be such precisely because they include the mechanisms and processes to overcome barriers to implementation. That is, effective reforms will be characterized by both substantive merit *and* mechanisms to assist their implementation. Further research will help determine whether TQM's ultimate success or failure is attributable to its substantive characteristics, its mechanisms for implementation, or both.

2) Will TQM assist or hinder the introduction of other school reform efforts? As Latham (1988) discussed, most schools introduce one innovation after another, usually introducing

something new well before the merit of existing innovations can be judged. It is our belief that schools practicing TQM should be less susceptible to this folly since decisions to introduce new innovations will be based on data, thorough study, evaluation, and discussion, and an analysis as to whether the proposed program is aligned with systemwide goals and priorities.

Once the decision to introduce a new innovation is made, TQM may also assist in its implementation. For example, in the study mentioned above, Gross, Giacquinta, and Bernstein discussed the failed introduction of the "catalytic role model" -- an innovation which represented significant, substantive change in teachers' classroom behavior. They attributed the low degree of implementation found in their study to five circumstances:

a) teachers' lack of clarity about the innovation (primarily role ambiguity)
b) teachers' lack of skills and knowledge needed to conform to the new model
c) unavailability of required instructional materials
d) incompatibility of organizational arrangements with the innovation
e) lack of staff motivation (which was not originally present, but developed)

We question whether the existence of a TQM system at the time the catalytic role model was introduced would have prevented these implementation problems. Research in organizations with well established TQM systems is needed to test this proposition.

3) Some may ask, "Can a school be practicing TQM without knowing it?" Research on effective schools suggests in high performing systems, many elements of TQM are indeed present. In some cases, TQM-like systems may be in place even though leadership and staff may have had no formal training in or even heard of TQM. For example, in describing perhaps the most well-known case of school transformation, Schmoker and Wilson (1993) said the following about school director Deborah Meier, who had not even heard of Deming at the time:

> (I)n the most important respects, Meier and her teachers have created a school environment that conforms in every important way to Deming's major principles: a democratic atmosphere, supportive leadership, team and collaborative effort, a clear and unified purpose, and an insistence

on regular analysis and evaluation of student performance data as a basis for continually improving on past practice to serve the school's customers.

In some cases, certain elements, but certainly not all, of TQM are being utilized as part of other reform efforts. For example, in implementing shared decision-making into an elementary school the following Quality-like elements were initially present: goals were set, training ensued, the principal exhibited enthusiasm and commitment, a plan-act-reflect-plan pattern was instituted. Later, systems thinking became the focus. In describing why shared-decision making is starting to achieve the desired outcomes, Ross and Webb (1995) listed four factors that have fostered change:

a) the commitment of faculty and the principal and their mutual respect;
b) all stakeholders were involved in key planning meetings;
c) use of structures to support increased communication -- small group process, suggestion box;
d) evaluation study that increased faculty's "voice".

Again, these conclusions represent key aspects of TQM, although it does not appear that staff or leadership in this school were explicitly aware of the TQM philosophy. In short, it may be that TQM is inherently similar to the "best practice" found in education. Research on the common elements of "effective schools" supports this contention (Purkey & Smith, 1982).

These findings suggest the need for empirical research to answer two questions: 1) What is the difference between schools that explicitly label their practices TQM and those that exemplify TQM without being aware of this paradigm? and, 2) What is the difference in outcomes between those schools which implement all, or almost all, of the TQM paradigm and those that implement selected elements?

4) In addition to the specific focus on assessing TQM's viability for producing educational improvement, this paper represents the starting point for building a framework with

which other proposed innovations and reforms can be judged. While there is an abundance of theoretical and empirical work on successful and unsuccessful organizational change efforts, it is currently not available in a concise manner that can be utilized by educational decision-makers when considering new innovations. It is our contention that countless hours and resources have been wasted across thousands of settings on change initiatives where a simple *a priori* comparison against such a framework would have predicted dismal results and perhaps prevented such waste. We think continued work on a framework that can be utilized by practitioners, consultants, and policy-makers when considering the promotion or adoption of new innovations should be a priority for researchers interested in promoting true improvement in education.

VI. Conclusion

More than seventy years ago, a New York teacher made the following statement:

> Last year it was the socialized recitation, or the Gary Plan, or dramatization or correlation; this year it is motivation, silent reading, or the Dalton Plan. Each is taken up in turn, indiscriminately adopted, presently elbowed out to make room for the next newcomer; and yet we are not saved. The old problems remain (quoted in Tyack & Cuban, 1995).

How prophetic this statement has proven -- educators are still indiscriminately adopting innovation after innovation, and still genuinely disappointed and surprised when the same old problems remain.

We consider this practice of indiscriminately adopting innovations increasingly indefensible in light of the growing body of literature on why organizational changes and innovations fail or succeed. Our position is that unless a proposed innovation can be shown, *a priori*, to be substantially aligned with the accumulating wisdom from past efforts, the expenditure of resources on untested and unproved ideas is unscrupulous at best.

In this paper, we have begun to examine whether TQM merits the support (financially, politically, and academically) that it currently enjoys in the educational community. We have

done so by attempting to rigorously compare and contrast the Quality paradigm with a sample drawn from the organizational change and school reform literatures. At this point, our analysis suggests a good deal of alignment between TQM and this accumulating wisdom, although numerous questions remain about the ability of TQM to overcome the political, cultural, and resource constraints facing school change efforts. In the spirit of continuous improvement, we will persist in our search for more complete answers and wholeheartedly welcome input and feedback.

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Tables 1-12

Table 1 – Deming's 14 Points

Deming	Jenkins' School Adaptation
PT1: Create constancy of purpose for improvement of product and service	Eliminate vacillating purposes, often known as 'flavors of the month'
PT2: Adopt the new philosophy	Accept that most school problems are systems problems and vow to tackle them
PT3: Cease dependence on mass inspection (of the final product)	Stop trying to inspect quality into education; instead invest in Deming's TQM
PT4: End the practice of doing business on price tag alone	Build long-term relationships of trust and loyalty with all stakeholders
PT5: Improve constantly and forever the system of production and service	Define improvement in all aspects of schooling and show continuous progress
PT6: Institute programs of training	Train all employees in Quality, and systems that perpetuate mgmt. by objectives
PT7: Institute leadership	Leaders must lead the improvement process rather than criticizing mistakes
PT8: Drive out fear	Stop using fear as the major tool to control students
PT9: Break down barriers between staff areas	Break down barriers between subsystems in education (i.e. elem. vs. secondary)
PT10: Eliminate slogans, exhortations, and targets for the work force	Eliminate mgmt. by objective; substitute constancy of purpose
PT11: Eliminate numerical quotas	Strive instead for more success and less failure; improvement not rankings
PT12: Remove barriers to pride of workmanship	Stop the demoralizing evaluation process of both students and teachers
PT13: Institute a vigorous program of education and retraining	Learn about everything (education), not just how to do the job better (training)
PT14: Take action to accomplish the transformation	Use everybody's help to transform the organization

Table 2 -- Interactive Factors Affecting Implementation

Fullan's Change Factors	TQM
1) Need -- a careful examination of needs/priorities	Customer Input and Focus; Studying and Evaluating Processes
2) Clarity -- clear explanation of the innovation, what new behaviors and roles are required, etc.	Pt 1 Create constancy of purpose ...
3) Complexity -- the difficulty and extent of change required of individuals responsible for implementation	Studying and Evaluating Process; Training, Pts 6 & 13; Pt 10 Eliminate slogans, exhortations ...; Pt 11 Eliminate numerical quotas
4) Quality/Practicality -- the degree to which the change addresses salient needs, fits teachers' situations, and contains concrete how-to-do-it qualities	(Internal) Customer Input and Focus; Training, Pts 6,13;
5) School District -- the district's history with previous reforms and central office leadership's demonstrated support -- through concrete, change-promoting actions	Leadership; Pt 14 Take action to accomplish ...
6) Board and Community -- the quality or active involvement (either cooperative or conflictual) of both groups	Customer Input and Focus; Pt 13 Institute education and retraining
7) The Principal -- demonstrates active support by providing psychological, time, and financial resources for teachers; through use of "legitimating" power; and with personal knowledge and use of innovation	Leadership, Pt 7; Training, Pts 6,13; Pt 8 Drive out fear; Pt 14 Take action
8) Teachers -- individual characteristics and collective factors resulting from interaction, teamwork, and joint problem-solving	Studying and Evaluating Processes in teams
9) Government and Other Agencies -- the effect that the nature of the relationship (supportive/obstructive, discrete/ continuous) has on the innovation	Systems Thinking; Customer Input and Focus

Table 3 -- Key Themes in the Implementation Process

Fullan's Key Themes	TQM
1) Vision-building -- creating a shared sense of vision that permeates the organization	Pt 1 Create constancy of purpose ...; Pt 2 Adopt the new philosophy
2) Evolutionary Planning -- constant adaptation of plan to fit local circumstances	Continuous Improvement through Studying and Evaluating Processes and Data Based Decision Making
3) Initiative-taking and Empowerment -- sharing of power, developing collaborative work cultures, encourage risk-taking	Leadership, teamwork; Studying and Evaluating Processes; Pt 8 Drive out fear; Pt 9 Break down barriers between staff ...; Pt 12 Remove barriers to pride
4) Staff Development/Resource Assistance -- both amount and type of training influence new learning and doing, attitudes, etc.; should be on-going and interactive	Training, Pts 6,13
5) Monitoring/Problem-Coping -- using information systems and resources to take actions to cope/solve problems; involves monitoring process of change, not just measuring outcomes	Studying and Evaluating Processes; Data Based Decision Making
6) Restructuring -- reorganizing necessary aspects of the workplace to make them conducive to the improvement effort	Systems Thinking; Data Based Decision Making; Pt 14 Take action

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Table 4 – Fullan's Eight Basic Lessons of the New Paradigm of Change

Fullan's New Lessons	TQM
1) You can't mandate what matters – the more complex the change, the less you can enforce it	TQM agrees
2) Change is a journey not a blueprint – change is non-linear and loaded with excitement and uncertainty	TQM agrees; thus Continuous Improvement philosophy
3) Problems are our friends – they are inevitable and needed for learning	TQM agrees, therefore Study and Evaluate Processes continuously
4) Vision and strategic planning come later – premature visions and planning blind	TQM probably disagrees, the starting point is creating "constancy of purpose" (Pt 1)
5) Individualism and collectivism must have equal power	TQM agrees
6) Neither centralization nor decentralization works – both top down and bottom up strategies are necessary	TQM agrees, both Leadership and teamwork are crucial; barriers should be eliminated
7) Connection with the wider environment is critical for success – internal and external learning are both critical	TQM agrees, calling for never-ending Customer Input and Focus
8) Every person is a change agent – change cannot be left to the experts	TQM agrees, thus Training and improvement for all

Table 5 – The Critical Path to Corporate Renewal

Beer, et al.'s Critical Steps	TQM
1) Mobilize commitment to change through joint diagnosis of business problems – shared diagnosis mobilizes initial commitment	Studying and Evaluating Processes; Customer Input and Focus
2) Develop a shared, task-aligned vision of how to organize and manage for competitiveness	Systems Thinking; Pt 1 Create constancy of purpose – Pt 2 Adopt the new philosophy
3) Foster consensus for the new vision, competence to enact it, and cohesion to move it along – leadership and support people are critical here	Leadership, Pt 7; Pts 6,13 Institute training and retraining; Pt 9 Break down barriers between staff; Pt 12 Remove barriers to pride
4) Spread revitalization to all departments without pushing it from the top	Training, Pts 6,13
5) Institutionalize revitalization through formal policies, systems, and structures	Pt 13 Institute training and retraining; Either inherent in or missing from TQM
6) Monitor and adjust strategies in response to problems in the revitalization process – formative, continual learning and monitoring	Continuous Improvement, Pt 5; Studying and Evaluating Processes; Pt 13 Institute training and retraining

Table 6 – The Five Commandments of Implementing Change

Kotter's 8 commandments	TQM
1) Analyze the organization and its need for change	Studying and Evaluating Processes Customer Input and Focus
2) Create a shared vision and common direction	P. 1 Create consistency of purpose P. 5 Adopt the new philosophy
3) Separate from the past	Moving from TQM
4) Create a sense of urgency	P. 1 Create consistency of purpose
5) Support a strong leader role	Leadership, P. 7
6) Line up political sponsorship – including broad based support throughout the organizational	TQM discusses breaking down barriers and eliminating fear (Pts 8 9) and multiple stakeholder input (CP), but are directly how to overcome inevitable politicking and resistance to changes in power structure
7) Craft an implementation plan – the plan should contain input from all levels and include specific goals and clear responsibilities	Customer Input and Focus Use Data Based Decision Making tools to set Continuous Improvement goals
8) Develop enabling structures – both practical (i.e. training, pilot tests) and symbolic (i.e. rearranging space) are important	TQM calls for Training and the creation of teams, also calls for removal of barriers (Pts 6 8 12 13). Does not necessarily say how/which structures to create
9) Communicate, involve people, and be honest – these overcome resistance and create stakeholder ownership in outcomes	Customer Input and Focus P. 8 Drive out fear P. 9 Break down barriers between staff
10) Reinforce and institutionalize the change – focus on institutionalizing the process, not a discrete change	Continuous Improvement, P. 5

Table 7 – Common Themes in Organizational Change

Change Theme	Noted by	TQM
1 Involve/encourage/gain ownership/participation of local people and other key interest groups	Silverstrong & Allen, 1974 Turky, 1983 Waldersee et al., 1995 Eriksson, 1999 Kanter, 1992	Customer Input and Focus P. 9 Break down barriers ... P. 10 Take action ...
2 Treat system approach	Silverstrong & Allen, 1974 Waldersee et al., 1995 Eriksson, 1999	Systems Thinking
3 Focus on changing culture assumptions, and accepted beliefs	Silverstrong & Allen, 1974 Waldersee et al., 1995 Eriksson, 1999	Data Based Decision Making P. 8 Drive out fear
4 Continuing contact need demonstrated by symbols, signals, people	Silverstrong & Allen, 1974 Kanter, 1992	Continuous Improvement P. 10 Eliminate slogans ... P. 11 Eliminate quotas
5 External workflow and environmental scanning	Turky, 1983 Eriksson, 1999	Customer Input and Focus Systems Thinking
6 Clearly stated mission/vision	Turky, 1983 Kanter, 1992	P. 1 Create consistency of purpose
7 New knowledge and understanding through training and development	Turky, 1983 Waldersee et al., 1995 Kanter, 1992	Training, Pts 6 13
8 Improvement in communication and authority ambiguity	Turky, 1983 Kanter, 1992	P. 8 Drive out fear P. 9 Break down barriers ... P. 11 Eliminate quotas
9 Management of political issues, coalition building	Turky, 1983 Waldersee et al., 1995 Kanter, 1992	Continuous Improvement and Pts 8 and 9, but provides weaknesses of TQM
10 Actively involved and supportive leadership	Waldersee et al., 1995 Kanter, 1992 Eriksson, 1999	Leadership, P. 7
11 Emphasis on results, standards, reward, data collection, and feedback	Silverstrong & Allen, 1974 Kanter, 1992	Continuous Improvement, P. 5 Data Based Decision Making

Table 6 – Six Reasons (x3) by Common Program Size | Rank

1. Activities are not key to specific results – management is not explicit about what improvements it wants or how the activity will lead to improved results
2. The activities are too large scale and diffuse
3. Results is a four letter word – demanding short term results versus accepted norms and the belief that change does work
4. Behavioral measures – determination of "success" is based on measures of activities, not of final output or results
5. Staff and consultant driven
6. Risk is unfamiliar, not empirical – continuance of activities is based on faith in the unknown, not proof of improvements

Table 7 – TQM's Response to (x3) by Common Program Criticisms

Problem	TQM
1. Activities are not key to specific results	Continuous improvement goals should be concrete, continuously measured, and adjusted upwards
2. The activities are too large scale and diffuse	Systems Thinking is critical; anything else is anti-TQM
3. Results is a four letter word	Continuous improvement implies both short- and long-term improvements in processes and outcomes
4. Behavioral measures	TQM is about CHANGE processes in outcomes; outcomes are not completely ignored
5. Staff and consultant driven	TQM is fundamentally about empowered employees throughout the organization
6. Risk is unfamiliar, not empirical	TQM calls for Data Based Decision Making

Table 10 - Program's Myths and Realities of Education Reform

Myth	Reality
M1: You can change instruction via advocacy, exercise and training	R1: Large scale reform requires highly specific, systematic, and structured methodologies with supporting materials of demonstrably high quality
M2: Theory is a useful guide for the design of programs and reforms	R2: Metaphor is much more important in the design of sophisticated programs than research and theory
M3: You can reform education by disseminating knowledge and training it up to practitioners to apply that knowledge	R3: Reform requires technology, methodology, structural changes, and materials
M4: The most important change involves radical reformulation of existing practice	R4: The most important changes are incremental ones
M5: The best way to achieve reform is through schoolwide change/restructuring	R5: Schoolwide change, while a nice idea, has never worked on a large scale and is probably not necessary
M6: You can develop training through reforms designed to enhance conditions of learning, such as self-concept or empowerment	R6: The best way to enhance learning is to develop more powerful programs to enhance learning. Worrisome facts around the conditions of learning never lead to substantial improvements in learning
M7: You can understand large scale change by understanding what happens on a very small scale	R7: Large scale change reflects programs that are often dramatically opposed to those in effect in small scale research
M8: Research programs cannot be effective on a large scale, and attempts to implement such programs can wreck(s) of their individuality	R8: It is possible to develop a new generation of far more powerful programs that can be effective on a large scale

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Table III – Common Elements of Failed Reform Efforts

Common Element	Noted by:	TQM
1. Approach is fundamentally flawed & flawed	Clark & Amato, 1994 Darling-Hammond, 1993 Sarason, 1982	Fundamentally Theory Y based (see Pts 3,8,9,10,11,12,13,14)
2. Training is insufficient	Tye, 1993 Sarason, 1982 Latham, 1988	Training, Pts 4,13
3. Power/Authority/Political nature not dealt with	Tye, 1993 Tyack & Cohen, 1993 Sarason, 1990 Cuban, 1988 Murphy & McQuillan, 1993	Work goes on-not due TQM, Pt 8 for Data Based Decision Making empowered teams, and the elimination of fear and barriers (Pts 8,9)
4. Doesn't alter "deep structure" or conception of "real school"	Tye, 1993 Tyack & Cohen, 1993	Indeterminate a priori-Not Common Input and Focus, Studying and Evaluating Processes, and Data Based Decision Making may alter existing conceptions
5. Focus is on school/adults or people, not the entire system	Sarason, 1982 & 1990 Goodlad, 1984 Popkewitz, 1988 Clark & Amato, 1994	Systems Thinking Pt 4 Drive out fear Pt 9 Break down barriers Pt 11 Eliminate quotas Pt 12 Remove barriers
6. Lack of understanding of school history and culture	Sarason, 1982 & 1990 Tyack, 1993	Not directly addressed by TQM
7. Inadequate role revisions, reflective especially for teachers	Tyack & Cohen, 1993 Lieberman, 1988 Murphy & McQuillan, 1993 Latham, 1988	TQM calls for Training-see Pts 4,13) and Studying and Evaluating Processes-e.teams, fear-free and quotas, may be problems, especially initially
8. Key stakeholders (i.e. students, teachers, public) excluded	Tyack & Cohen, 1993 Sarason, 1990	Common Input and Focus; Systems Thinking Pt 9 Break down barriers.

Table 12 -- Common Elements of Successful Reform Efforts

Common Element	Noted by:	TQM
1) Strong professional learning community; increased teacher knowledge through professional development and training	Louis, Kruse, & Raywid, 1996 Sykes, 1996 Darling-Hammond, 1993 Lieberman, 1995 Wilson & Corcoran, 1988 Berman & McLaughlin, 1977 Muncey & McQuillan, 1993	Training, Pts 6,13; Studying and Evaluating Processes in teams; Pt 8 Drive out fear; Pt 9 Break down barriers...; Pt 11 Eliminate quotas; Pt 12 Remove barriers...
2) Respect for teachers and their culture; active enlisting of teachers in planning and implementing change	Tyack, 1995 Tyack & Cuban, 1995 Lieberman, 1995 Berman & McLaughlin, 1977	Customer Input and Focus; Leadership and empowered teams; Pt 14 Take action...
3) Focus on realistic, continuous, incremental improvements; don't over-promise in short-run	Tyack, 1995 Tyack & Cuban, 1995 Wilson & Corcoran, 1988 Pogrow, 1996	Continuous Improvement; Pt 1 Create constancy...; Pt 2 Adopt the new...
4) Leadership through active participation and support	Sarason, 1990 Wilson & Corcoran, 1988 Berman & McLaughlin, 1977	Leadership, Pt 7
5) Local initiation and leadership; adaptation to local circumstances	Tyack & Cuban, 1995 Berman & McLaughlin, 1977	Customer Input and Focus; Leadership and empowered teams, Pt 7
6) Focus on whole system, involve entire community and all stakeholders	Steinberg, 1996 Lieberman, 1995 Wilson & Corcoran, 1988	Systems Thinking; Customer Input and Focus; Pt 4 End the practice...; Pt 9 Break down barriers; Pt 14 Take action...